invention as embodied and broadly described herein, the process of the present invention comprises transporting the reactor effluent obtained during the ammoxidation of propane, propylene or isobutylene to a quench column wherein the hot effluent gases are cooled by contact with an aqueous spray, passing the cooled reactor effluent overhead to an absorber column wherein the HCN and crude acrylonitrile or methacrylonitrile is absorbed in water, passing the aqueous solution containing the HCN and acrylonitrile or methacrylonitrile, plus other impurities to a first distillation column (recovery column), where a significant portion of the water and impurities are removed as a liquid bottoms product, while HCN, water, a minor portion of impurities and acrylonitrile or methacrylonitrile are removed as an overhead vapor stream. This overhead vapor stream is further cooled using a heat exchanger, and directed to a decanter, to separate and condense liquids which are returned to the recovery process, while the remaining vapor stream is directed to a flare, incinerator, or other disposal process. The organic stream is fed to the heads column for separation of HCN from acrylonitrile.

Please replace the last paragraph beginning on page 7 with the following:

The general recovery and purification of acrylonitrile of methacrylonitrile, and the present invention will now be described in detail with reference to Figure 1. The reactor effluent 11 obtained by the ammoxidation of propane, propylene or isobutylene, ammonia and oxygen containing gas in a fluid bed reactor (not shown) while in contact with a fluid bed ammoxidation catalyst is transported to a quench column 10 via transfer line 11, wherein the hot effluent gases are cooled by contact with water spray 14. The cooled effluent gas containing the desired product (acrylonitrile or methacrylonitrile, acetonitrile and HCN) is then passed into the bottom of an absorber column 20 via line 12 wherein the products are absorbed in water which enters absorber column 20 from the top via line 24. The non-absorbed gases pass from the absorber through pipe 22 located at the top of the absorber 20. The aqueous stream containing the desired product is then passed via line 23 from the bottom of absorber 20 to the upper portion of a first distillation column 30 (recovery column) for further product purification. The

product is recovered from the top portion of recovery column 30 and sent to a second distillation column 40 (heads column) 40 via line 32, while water and other impurities are removed from the recovery column 30 via line 33. In the heads column 40, the HCN is taken overhead and removed from the column via line 42, cooled in overhead condenser 80, and the resulting material directed to reflux drum 50 via line 51. Liquid reflux from the reflux drum 50 is returned to the upper portion of the heads tower via line 53. Vapor phase material is removed from the reflux drum 50 via line 52 and cooled in HCN product condenser 90. Optional intermediate condenser 60 can be added to heads column 40. Material is withdrawn from column 40 above feedline 32 by line 61, cooled, and returned to the heads column 40 by line 62. Optional decanter 70 can be added to heads column 40. Side material is withdrawn from column 40 by line 71 and the organic phase is returned by line 72.

In the Claims:

Kindly cancel Claims 3-5.

Please amend Claims 1, 7, 8, 9,11, 12 and 13 as follows:

1. A process for the recovery of acrylonitrile, methacrylonitrile or hydrogen cyanide obtained from the reactor effluent of an ammoxidation reaction of propane, propylene or isobutylene comprising passing said reactor effluent through an absorber column, a recovery column and a heads column comprising a feed tray wherein the improvement comprises operating said heads column in a manner which inhibits the formation of an aqueous phase above the feed tray of said heads column.

7. The process of claim 1, wherein said heads column comprises stripping trays and wherein said operating manner of said heads column comprises increasing the number of stripping trays of said head column.

8. The process of claim 1, wherein said heads column comprises a reboiler with a reboiler duty and wherein said operating manner of said heads column comprises increasing the reboiler duty of said heads column.

9. The process of claim 1, wherein said heads column comprises a reflux condenser and wherein said operating manner of said heads column